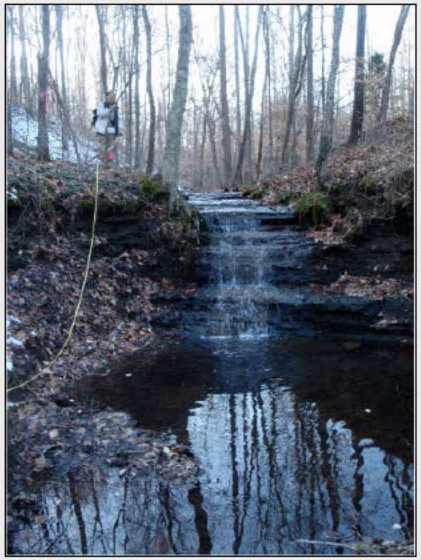
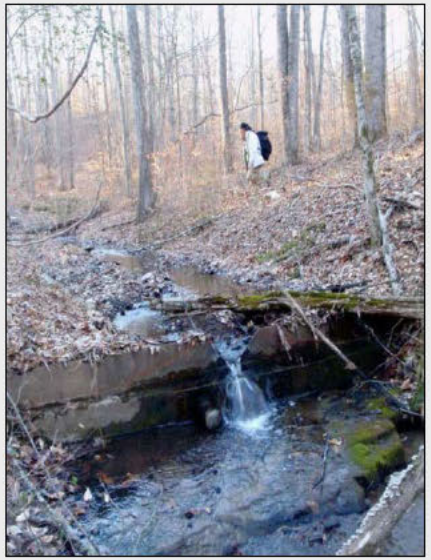
Murray-Ohio Dump Site
Lawrenceburg, Lawrence County, Tennessee

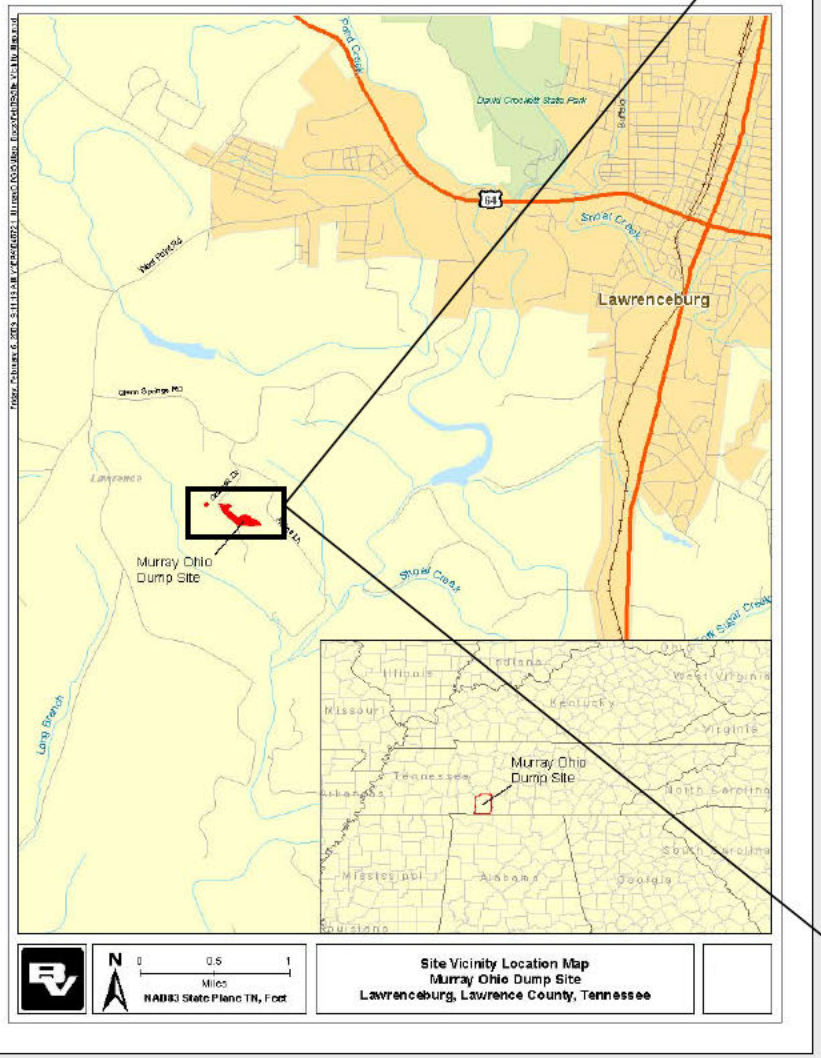




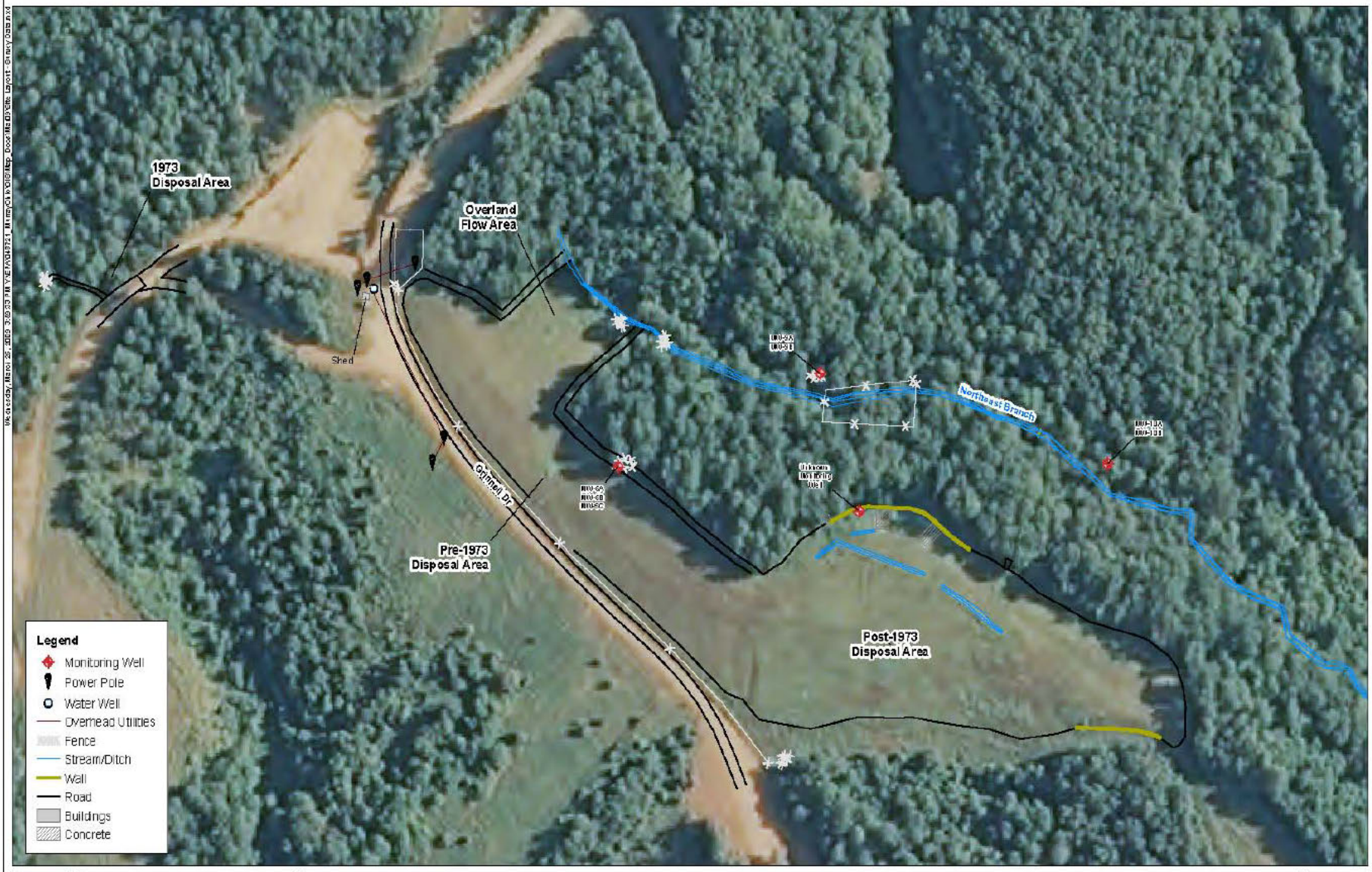
FY 2012 Remedial Action Priority Panel Briefing
EPA Spill #: 0496

US EPA – REGION 4

Murray-Ohio Dump Landfills



City of Lawrenceburg Landfills



Site Layout
Murray Ohio Dump Site
Lawrenceburg, Lawrence County, Tennessee

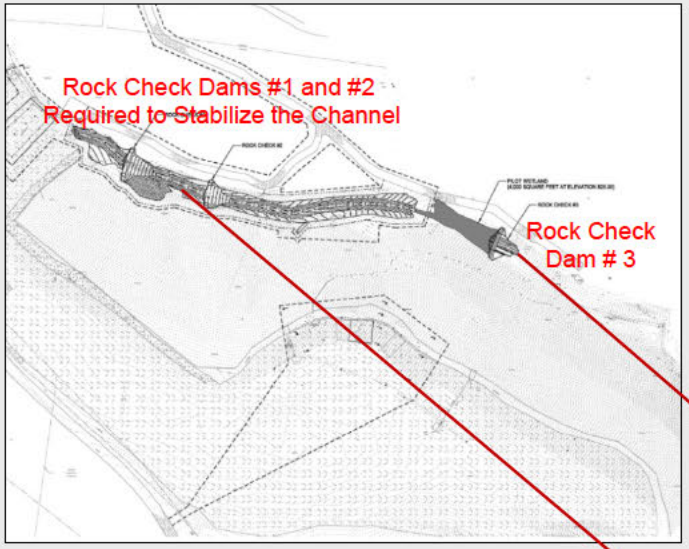
SITE BACKGROUND

- Several investigations occurred between 1979 and 1984.
- Under the 1990 AOC, Murray agreed to conduct the RI/FS.
- Results of the RI – Groundwater and the Northeast Branch were impacted.
  COCs - CR+6, Total Cr and Nickel.
- The primary components of the 1994 ROD:
  - Construction of cap over the disposal areas.
  - Continued maintenance of the cover system.
  - Ground water, seep, and surface water monitoring.
  - Deed restrictions and fencing around the disposal areas.
  - Contingent construction of a seep collection and treatment system with discharge of treated effluent to Shoal Creek or a water treatment facility *($10M – 2009 Dollars).*
- July 1998: Remedial Action was completed at the site.
- November 2003: Murray filed Bankruptcy
- Three Five-Year Reviews have been completed for this site.
  -The 2001, 2006 and 2011 FYRs noted water quality problems in the Northeast Branch.

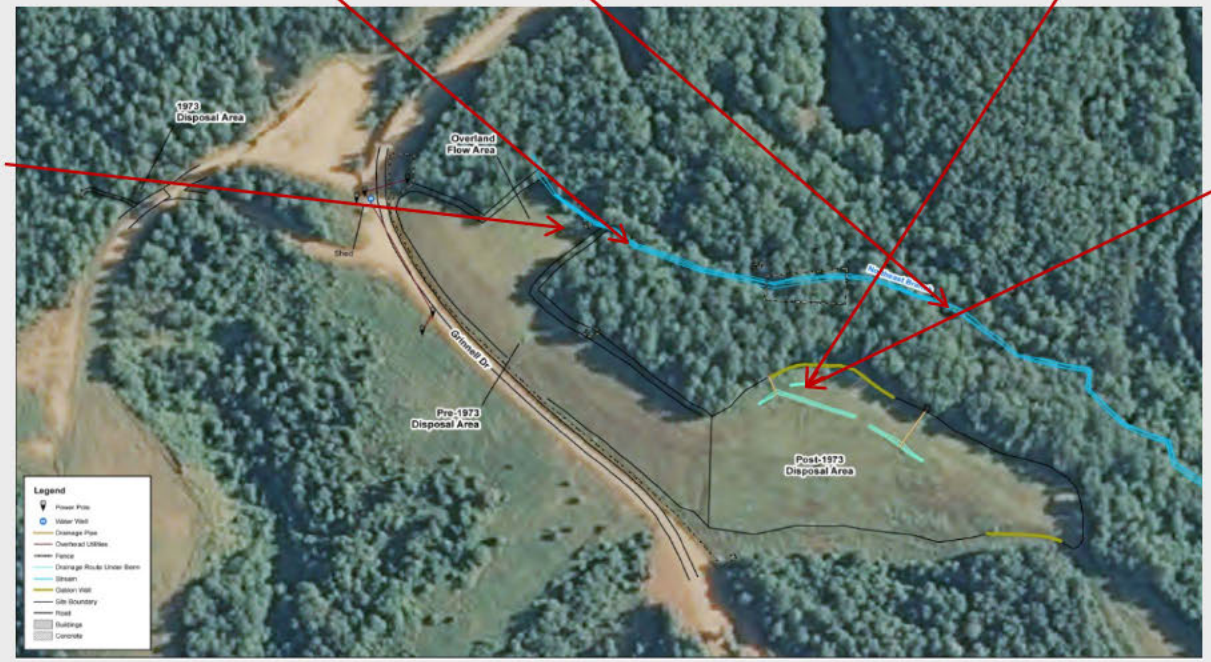
SITE BACKGROUND (CON'T)

- 2007/ 2008 Evaluation results triggered the need to implement the contingency remedy.
- March 2009 – July 2009: Black & Veatch conducted a RI/FFS.
- September 2009: EPA issued AROD
  - Contaminated sediment removal in the Northeast Branch
  - In situ treatment of sediment, seep water, and surface water using constructed wetlands
  - Cap repair and continued monitoring of all media of concern
- May 2011: Observed soil cover stability failure of the Cap (Gabion Area). Due to heavy rainfall events, head cutting is continuing and accelerating in the Overland Flow Area.
- The 95% RD was submitted for Review by EPA and TDEC in September 2011.
- Pending funding, EPA anticipates completion of the RD within 1 – 1.5 months.
- In the Interim, two Superfund State Contracts (SSC) are near completion
  1. Phase 1: Includes channel stabilization to prevent a release from the Overland Flow Area and to repair the Overland Flow and Gabion Areas of the Cap
  1. Phase 2: Includes one wetland, long-term operation and maintenance and monitoring

CHANNEL STABILIZATION AND CAP REPAIR AREAS/ SOIL COVER STABILITY FAILURE



Cap Repair
Overland Flow Area



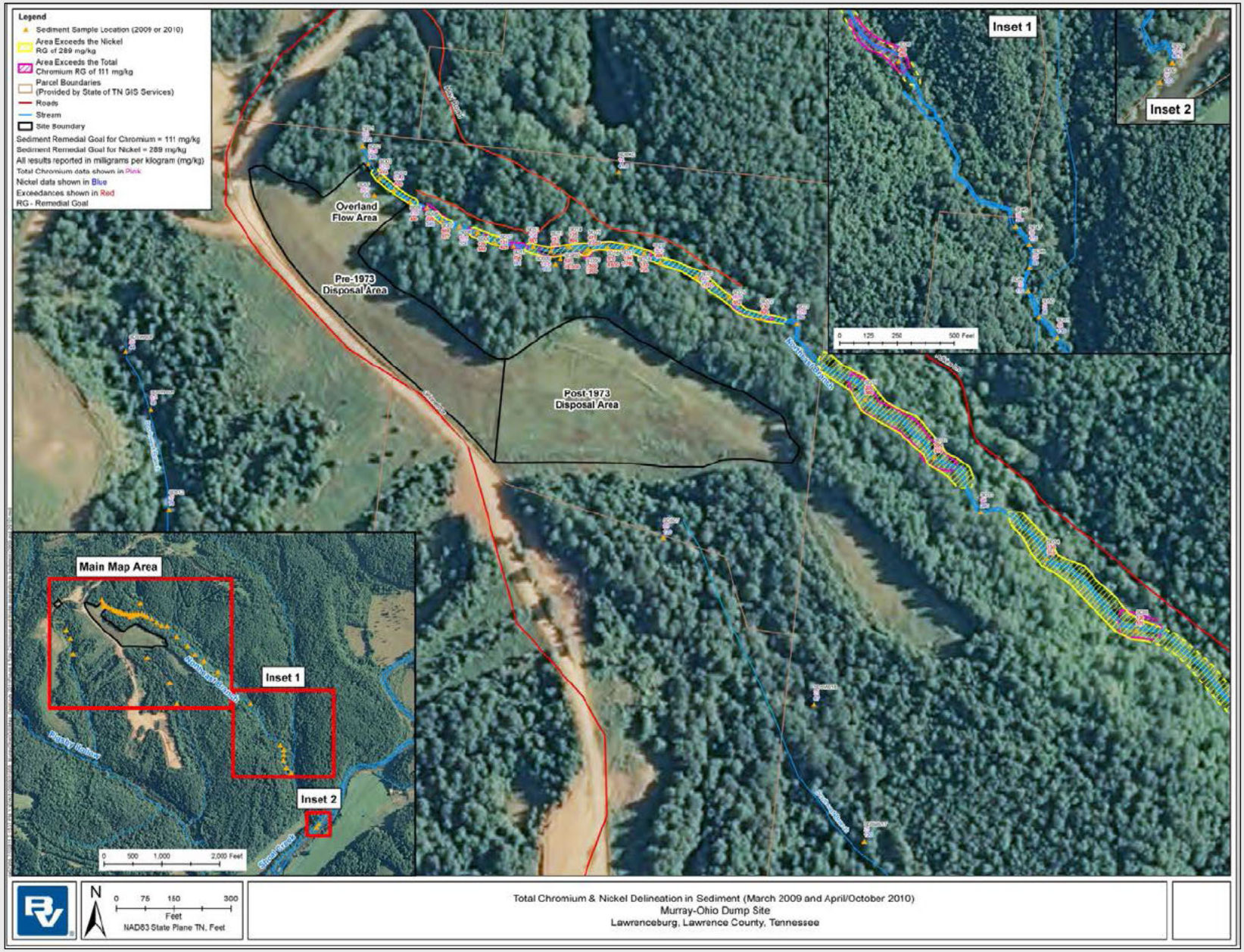
Cap Repair
Gabion Area

RESPONSE COSTS FOR THE 2009 SELECTED REMEDY

Total Capital Cost = $2,002,313		
Scope of Work	**Year of Costs**	**Costs**
Phase 1: 2 Check Dams, Repairs to the Overland Flow and Gabion Areas of the Cap	2012	$855,185
Phase 2: Check Dam #3, Pilot Monitoring of Wetland and Monitoring of all media	2013-2014	$495,094
Phase 2: Check Dam #4 and Check #5 - Optional, depending on the effectiveness of Check Dam #3	2015	$652,034

Total O&M Cost = $4,731,497	
Scope of Work	**Costs**
O&M of Cap (Historical Data indicated an estimated Annual O&M Cost of $40K per year for 30 years)	$1,903,017
Site Monitoring (Includes all impacted media, ground water, surface water, seeps, and sediment)	$1,180,982
Contingency Repairs: Similar to the level of repairs implemented under Phase I (Assumes 2 events over 30 years)	$445,000
Streambed Restoration (Assumes 2 events over 30 years)	$234,917
Water Quality Monitoring (Benthic Surveys, assessments conducted over 30 years)	$302,780
Wetland/Check Dam #3 & Road Maintenance (Conducted over 30 Years)	$664,801
Please Note: All O&M costs are expected to decrease at a minimum of 20% through modifications to the final costs assumptions and through partnerships with TDEC and the City of Lawrenceburg, TN	

AREA OF CONTAMINANT REMOVAL IN THE NORTHEAST BRANCH




THANK YOU!!!